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EXAMINER	
REGO, DOMINIC E	
ART UNIT	PAPER NUMBER
2618	

NOTIFICATION DATE	DELIVERY MODE
03/23/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/809,996	KRISHNAN ET AL.	
	Examiner	Art Unit	
	DOMINIC E. REGO	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 February 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-20,22-39 and 41-46* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-20,22-39 and 41-46* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 02/18/2009 has been entered.

2. This communication is responsive to the application filed on February 22, 2009.

Claims 1,3-20,22-39,41-46 are pending and presented for prosecution.

New claim 46 has been added.

Claim Objections

3. Claim 22 is objected to because of the following informalities: Claim 22 should depend on independent claim 20, not cancelled claim 21. Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1,3-6,8-11,13-16,18-20, 22-25,27-30,32-35,37-39, 41-43, and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grandolfo (US Patent #7,184,767) in view of Choi (US Patent #6,967,944).

Regarding claim 1, Grandolfo teaches a method of communications from a piconet (Figure 6C), comprising:

engaging in intra-piconet communications *(Figure 6C, engaging in intra-piconet communications between device A2-522a and B2-522b; Col 11, lines 47-58: Grandolfo teaches in FIG. 6C, device A-2 522a in network A 505a is controller-enabled (i.e., it is capable of becoming a controller). And when device A-2 522a forms a child network, the usable physical area 560a of that child network is large enough to contain device B-2 522b. Similarly, if device B-2 522b in network B 505b were also controller-enabled (i.e., capable of becoming a controller), then it could form a child network whose usable physical area 560b was large enough to contain device A-2 522a. Regardless of which device 522a, 522b created the child network, the two devices 522a and 522b communicate with each other via a child wireless links 590, so devices 522a and 522b engaging in intra-piconet communication)*;

receiving a pilot signal from a foreign terminal *(Col 11, lines 55-58: Regardless of which device 522a, 522b created the child network, the two devices 522a and 522b communicate with each other via a child wireless links 590, so device 522a receiving a pilot signal from a foreign terminal 522b in order to have a link or connection)*;

exchanging messages with the foreign terminal *(Col 11, lines 47-58: Grandolfo teaches regardless of which device 522a, 522b created the child network, the two devices 522a and 522b communicate with each other via a child wireless links 590, means exchanging messages with the foreign terminal)* if the pilot signal is below the threshold *(Col 11, lines 47-58, Grandolfo teaches regardless of which device 522a, 522b created the child network, the two devices 522a and 522b communicate with each other via a child wireless links 590. Also, Fig. 6C in view of cell 505a, when master terminal 510a detects that receiving signal strength from isolated terminal 522a below threshold, edge terminal 522a becomes master terminal and form a cell 560a which includes the isolated terminal 522b so that both devices 522a and 522b have peer-to-peer connection to communicate with each other and whenever, they have peer-to-peer connection, they must exchange messages with each other)*;

establishing a peer-to-peer connection with the foreign terminal *(Col 11, lines 47-58: Grandolfo teaches regardless of which device 522a, 522b created the child network, the two devices 522a and 522b communicate with each other via a child wireless links 590, so establishing a peer-to-peer connection with the foreign terminal B2-522b in view of piconet 505a or the foreign terminal A2-522a in view of piconet 505b)*, except for determining strength of the pilot signal.

However, in related art, Choi teaches determining strength of the pilot signal *(received signal strength)* (Col 5, lines 9-31).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the above teaching of Choi to Grandolfo, in order to

have peer-to-peer communication with the foreign terminal, so that the data can be transmitted constantly without deteriorating.

Regarding claims 3 and 22, the combination of Grandolfo and Choi teach all the claimed elements in claims 1 and 20. In addition, Grandolfo teaches the method wherein the exchanged messages comprise a transmission to the foreign terminal including a list of a plurality of terminals in the piconet *(Col 11, line 20-Col 12, line 63, especially Col 12, lines 56-63)*.

Regarding claims 4 and 23, the combination of Grandolfo and Choi teach all the claimed elements in claims 3 and 22. In addition, Grandolfo teaches the method wherein the foreign terminal is a member of a remote piconet, and wherein the exchanged messages comprise receiving from the foreign terminal a list of a plurality of terminals in the remote piconet (Col 11, line 20-Col 12, line 63, especially Col 12, lines 56-63).

Regarding claims 5 and 24, the combination of Grandolfo and Choi teach all the claimed elements in claims 4 and 23. In addition, Grandolfo teaches the method further comprising mapping the list of terminals in the remote piconet to the foreign terminal (Col 11, line 20-Col 12, line 63, especially Col 12, lines 56-63).

Regarding claims 6 and 25, the combination of Grandolfo and Choi teach all the claimed elements in claim 1 and 20. In addition, Grandolfo teaches the method wherein the establishment of the peer-to-peer connection comprises negotiating a data rate and transmission power level (Col 12, lines 12-20, lines 56-63).

Regarding claims 8 and 27, the combination of Grandolfo and Choi teach all the claimed elements in claim 1 and 20. In addition, Grandolfo teaches the method further comprising listening for a transmission from the foreign terminal when not engaged in the intra-piconet communications *(Figure 6C, Grandolfo teaches element 522a listening for a transmission from the foreign terminal 522b when not engaged in the intra-piconet communication (Col 11, lines 20-58)*.

Regarding claims 9 and 28, the combination of Grandolfo and Choi teach all the claimed elements in claims 8 and 20. In addition, Grandolfo teaches the method wherein the transmission is received while listening for it, the method further comprising forwarding the received transmission to a terminal within the piconet (Col 11, lines 20-58).

Regarding claims 10 and 29, the combination of Grandolfo and Choi teach all the claimed elements in claims 9 and 28. In addition, Grandolfo teaches the method further comprising receiving instructions to engage in the intra-piconet communications during a first time period and to forward the received transmission to the terminal in a second time period (Col 11, lines 20-58; Col 12, lines 56-67).

Regarding claims 11 and 30, the combination of Grandolfo and Choi teach all the claimed elements in claims 10 and 29. In addition, Grandolfo teaches the method wherein the first time period is different from the second time period (Col 11, lines 20-58; Col 12, lines 56-67).

Regarding claims 13 and 32, the combination of Grandolfo and Choi teach all the claimed elements in claims 9 and 28. In addition, Grandolfo teaches the method

further comprising providing feedback to the foreign terminal acknowledging that the transmission from the foreign terminal was received (Col 5, lines 43-51; Col 11, lines 47-58; and Col 13, lines 24-42, especially, Col 13, lines 24-42).

Regarding claims 14 and 33, the combination of Grandolfo and Choi teach all the claimed elements in claims 1 and 20. In addition, Grandolfo teaches the method further comprising receiving a transmission from a terminal within the piconet, and forwarding the received transmission to the foreign terminal (Col 11, lines 47-58).

Regarding claims 15 and 34, the combination of Grandolfo and Choi teach all the claimed elements in claims 14 and 33. In addition, Grandolfo teaches the method further comprising receiving instructions to engage in the intra-piconet communications during a first time period *(Figure 6C, receiving instructions to engage in the intra-piconet communications during a first period from controller 510a in view of device A2 522a)*, receiving the transmission from the terminal in a second time period *(Figure 6C, receiving the transmission from the terminal A2-522a in a second time period)*, and forwarding the received transmission to the foreign terminal in a third time period (*Figure 6C, forwarding the received transmission to the foreign terminal B2-522b in a third time period;* Col 11, line 46-Col 12, line 20).

Regarding claims 16 and 35, the combination of Grandolfo and Choi teach all the claimed elements in claims 15 and 34. In addition, Grandolfo teaches the method wherein the first, second and third time period are all different from one another (Col 11, line 46-Col 12, line 20).

Regarding claims 18 and 37, the combination of Grandolfo and Choi teach all the claimed elements in claims 14 and 33. In addition, Grandolfo teaches the method further comprising receiving feedback from the foreign terminal indicating that the received transmission forwarded to the foreign terminal was received by the foreign terminal (Col 11, line 46-Col 12, line 20; Col 12, lines 56-63, especially, Col 12, lines 56-63).

Regarding claims 19 and 38, the combination of Grandolfo and Choi teach all the claimed elements in claim 14 and 33. In addition, Grandolfo teaches the method wherein the forwarding of the received transmission to the foreign terminal comprises transmitting the received transmission to the foreign terminal a plurality of times (Col 11, line 46-Col 12, line 20).

Regarding claim 20, Grandolfo teaches a communications terminal configured to operate in a piconet (Figure 6C), comprising:

a receiver configured to detect a pilot signal from a foreign terminal (*Col 11, lines 55-58: Regardless of which device 522a, 522b created the child network, the two devices 522a and 522b communicate with each other via a child wireless links 590, so device 522a receiving a pilot signal from a foreign terminal 522b in order to have a link or connection);*

a controller configured to exchange message with the foreign terminal *(Col 11, lines 47-58: Grandolfo teaches regardless of which device 522a, 522b created the child network, the two devices 522a and 522b communicate with each other via a child wireless links 590, means exchanging messages with the foreign terminal)* that

facilitates establishing a peer-to-peer connection with the foreign terminal to support communications (*Col 11, lines 47-58: Grandolfo teaches regardless of which device 522a, 522b created the child network, the two devices 522a and 522b communicate with each other via a child wireless links 590, so establishing a peer-to-peer connection with the foreign terminal B2-522b in view of piconet 505a or the foreign terminal A2-522a in view of piconet 505b),* the controller further being configured to support intra-piconet communications (*Figure 6C, engaging in intra-piconet communications between device A2-522a and B2-522b; Col 11, lines 47-58: Grandolfo teaches in FIG. 6C, device A-2 522a in network A 505a is controller-enabled (i.e., it is capable of becoming a controller). And when device A-2 522a forms a child network, the usable physical area 560a of that child network is large enough to contain device B-2 522b. Similarly, if device B-2 522b in network B 505b were also controller-enabled (i.e., capable of becoming a controller), then it could form a child network whose usable physical area 560b was large enough to contain device A-2 522a. Regardless of which device 522a, 522b created the child network, the two devices 522a and 522b communicate with each other via a child wireless links 590, so devices 522a and 522b engaging in intra-piconet communication*),

Further, Col 11, lines 47-58, Grandolfo teaches regardless of which device 522a, 522b created the child network, the two devices 522a and 522b communicate with each other via a child wireless links 590. Also, Fig. 6C in view of cell 505a, when master terminal 510a detects that receiving signal strength from isolated terminal 522a below threshold, edge terminal 522a becomes master terminal and form a cell 560a which

includes the isolated terminal 522b so that both devices 522a and 522b have peer-to-peer connection to communicate with each other and whenever, they have peer-to-peer connection, they must exchange messages with each other.

Also, Choi teaches determine its strength and determining if the pilot signal strength is below a threshold (Paragraphs 0011,0040, and 0049).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the above teaching of Choi to Grandolfo, in order to have peer-to-peer communication with the foreign terminal, so that the data can be transmitted constantly without deteriorating.

Regarding claim 39, Grandolfo teaches a communications terminal configured to operate in a piconet (Figure 6C), comprising:

means for detecting a pilot signal from a foreign terminal *(Col 11, lines 55-58: Regardless of which device 522a, 522b created the child network, the two devices 522a and 522b communicate with each other via a child wireless links 590, so device 522a receiving a pilot signal from a foreign terminal 522b in order to have a link or connection)*;

means for exchanging messages with the foreign terminal *(Col 11, lines 47-58: Grandolfo teaches regardless of which device 522a, 522b created the child network, the two devices 522a and 522b communicate with each other via a child wireless links 590, means exchanging messages with the foreign terminal),* that facilitates establishing a peer-to-peer connection with the foreign terminal to support communications *(Col 11, lines 47-58: Grandolfo teaches regardless of which device 522a, 522b created the child*

network, the two devices 522a and 522b communicate with each other via a child wireless links 590, so establishing a peer-to-peer connection with the foreign terminal B2-522b in view of piconet 505a or the foreign terminal A2-522a in view of piconet 505b); and

means for supporting intra-piconet communications *(Figure 6C, engaging in intra-piconet communications between device A2-522a and B2-522b; Col 11, lines 47-58: Grandolfo teaches in FIG. 6C, device A-2 522a in network A 505a is controller-enabled (i.e., it is capable of becoming a controller). And when device A-2 522a forms a child network, the usable physical area 560a of that child network is large enough to contain device B-2 522b. Similarly, if device B-2 522b in network B 505b were also controller-enabled (i.e., capable of becoming a controller), then it could form a child network whose usable physical area 560b was large enough to contain device A-2 522a. Regardless of which device 522a, 522b created the child network, the two devices 522a and 522b communicate with each other via a child wireless links 590, so devices 522a and 522b engaging in intra-piconet communication),*

Further, Col 11, lines 47-58, Grandolfo teaches regardless of which device 522a, 522b created the child network, the two devices 522a and 522b communicate with each other via a child wireless links 590. Also, Fig. 6C in view of cell 505a, when master terminal 510a detects that receiving signal strength from isolated terminal 522a below threshold, edge terminal 522a becomes master terminal and form a cell 560a which includes the isolated terminal 522b so that both devices 522a and 522b have peer-to-

peer connection to communicate with each other and whenever, they have peer-to-peer connection, they must exchange messages with each other.

Also, Choi teaches means for determining the strength of the detected pilot signal and determining if the pilot signal strength is below a threshold (Col 5, lines 9-31).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the above teaching of Choi to Grandolfo, in order to have peer-to-peer communication with the foreign terminal, so that the data can be transmitted constantly without deteriorating.

Regarding claim 41, the combination of Grandolfo and Choi teaches all the claimed elements in claim 1. In addition, Grandolfo teaches the method, wherein engaging in intra-piconet communications further comprises: receiving a pilot signal from a master terminal; determining that the strength of the pilot signal from the master terminal is below a threshold; and transmitting a pilot signal (Col 5, lines 9-31);

establishing a new piconet in response to a foreign terminal requesting synchronous communication (*Col 11, lines 47-58: Grandolfo teaches regardless of which device 522a, 522b created the child network, the two devices 522a and 522b communicate with each other via a child wireless links 590, so establishing a new piconet in response to a foreign terminal requesting synchronous communication)*.

Regarding claim 42, the combination of Grandolfo and Choi teach all the claimed elements in claim 1. In addition, Choi teaches the communications terminal, wherein the receiver is further configured to detect a pilot signal from a master terminal and determine its strength, and the controller is further configured to transmit a pilot

signal if the pilot signal from the master terminal strength is below a threshold (Col 5, lines 9-31).

Regarding claim 43, the combination of Grandolfo and Choi teach all the claimed elements in claim 42. In addition, Choi teaches the communications terminal, wherein the controller is further configured to establish a new piconet in response to a foreign terminal requesting synchronous communication (*Col 11, lines 47-58: Grandolfo teaches regardless of which device 522a, 522b created the child network, the two devices 522a and 522b communicate with each other via a child wireless links 590, so establishing a new piconet in response to a foreign terminal requesting synchronous communication)*.

Regarding claim 46, Grandolfo teaches a communication device configured to: from a master terminal (Fig 6C, item 510a) of a piconet, receive a designation as an edge terminal (Fig 6C, device 522a) in the piconet; based on being designated an edge terminal (Fig 6C, item 522a), listen for pilot signals from isolated terminals (Fig 6C, item 522b) not included in the piconet; if a pilot signal with a signal strength below a threshold is detected from an isolated terminal (Fig. 6C, item 522b), add the isolated terminal (Fig. 6C, item 522b) to a peer-to-peer connectivity list *(Fig. 6C, device 522a to device 522b connectivity list)*, the peer-to-peer connectivity list identifying terminals outside the piconet that may be reached with peer-to-peer transmission *(Fig. 6C, device 522a to device 522b, the peer-to-peer connectivity list identifying terminals outside the piconet that may be reached with peer-to-peer transmission)*; and forward a list to the isolated terminal identifying terminals included in the piconet *(Figure 6C, engaging in*

intra-piconet communications between device A2-522a and B2-522b; Col 11, lines 47-58: Grandolfo teaches in FIG. 6C, device A-2 522a in network A 505a is controller-enabled (i.e., it is capable of becoming a controller). And when device A-2 522a forms a child network, the usable physical area 560a of that child network is large enough to contain device B-2 522b. Similarly, if device B-2 522b in network B 505b were also controller-enabled (i.e., capable of becoming a controller), then it could form a child network whose usable physical area 560b was large enough to contain device A-2 522a. Regardless of which device 522a, 522b created the child network, the two devices 522a and 522b communicate with each other via a child wireless links 590, so devices 522a and 522b engaging in intra-piconet communication). Also Choi teaches if a pilot signal with a signal strength below a threshold is detected from an isolated terminal (*Col 5, lines 9-31, Choi teaches if the received signal quality degrades below a set limit, a subsequent frame message from the AP 14 to the active STAs is transmitted to designate time allocation for multiple peer-to-peer transmissions).* Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the above teaching of Choi to Grandolfo, in order to have peer-to-peer communication with the foreign terminal, so that the data can be transmitted constantly without deteriorating.

6. Claims 7,12,26, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grandolfo (US Patent #7,184,767) in view of Choi (US Patent

#6,967,944), and further in view of Watanabe et al. (US 2002/0080855).

Regarding claims 7 and 26, the combination of Grandolfo and Choi fail to teach the method wherein the establishment of the peer-to-peer connection further comprises negotiating code to spread peer-to-peer communications.

However, in related art, Watanabe teaches the method wherein the establishment of the peer-to-peer connection further comprises negotiating code to spread peer-to-peer communications (Paragraph 0027).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the above teaching of Watanabe to Grandolfo and Choi in order to perform frequency hopping using a plurality of frequency channels having different frequencies and defined in a usable frequency band (Watanabe, See abstract).

Regarding claims 12 and 31, the combination of Grandolfo and Choi fail to teach the method further comprising spreading the received transmission with a code.

However, in related art, Watanabe teaches the method further comprising spreading the received transmission with a code (Paragraph 0027).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the above teaching of Watanabe to Grandolfo and Choi in order to perform frequency hopping using a plurality of frequency channels having different frequencies and defined in a usable frequency band (Watanabe, See abstract).

7. Claims 17 and 36 rejected under 35 U.S.C. 103(a) as being unpatentable over Grandolfo (US Patent #7,184,767) in view of Choi (US Patent #6,967,944), and further in view of Papasakellariou et al. (US Patent # 7,133,435).

8. **Regarding claims 17 and 36,** the combination of Grandolfo and Choi fail to teach the method wherein the received transmission is spread with a first code, the method further comprising despreading the received transmission with the first code and spreading the received transmission with a second code.

However, in related art, Papasakellariou teaches the method wherein the received transmission is spread with a first code, the method further comprising despreading the received transmission with the first code and spreading the received transmission with a second code (See claim 1).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the above teaching of Papasakellariou to Grandolfo and Choi in order to receive signals properly.

9. Claims 44 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grandolfo (US Patent #7,184,767) in view of Choi (US Patent #6,967,944), and further in view of Icacono et al. (US Pub. No. 2005/0176468).

Regarding claim 44, the combination of Grandolfo and Choi fail to teach the

method, further comprising: determining that the strength of the pilot signal is above the threshold; and registering as member of a piconet with the foreign terminal.

However, in related art, Icacono teaches the method, further comprising: determining that the strength of the pilot signal is above the threshold; and registering as member of a piconet with the foreign terminal (Paragraphs 0032,0034, and 0037).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the above teaching of Icacono to Grandolfo and Choi in order to communicate with the selected cell.

Regarding claim 45, the combination of Grandolfo and Choi fail to teach the communications terminal, wherein the controller further configured to register as a member of a piconet with the foreign terminal to support communications if the pilot signal strength is above the threshold.

However, in related art, Icacono teaches the communications terminal, wherein the controller further configured to register as a member of a piconet with the foreign terminal to support communications if the pilot signal strength is above the threshold (Paragraphs 0032,0034, and 0037).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the above teaching of Icacono to Grandolfo and Choi in order to communicate with the selected cell.

Response to Arguments

10. Applicant's arguments filed 02/11/2009 have been fully considered but they are not persuasive. Regarding claims 1,20,39, and 41, Applicant argues the combination of Gandolfo and Choi fail to disclose "exchanging message with the foreign terminal if the pilot signal strength is below a threshold and establishing a peer-to-peer connection with the foreign terminal". The Examiner disagrees. Col 11, lines 47-58, Grandolfo teaches regardless of which device 522a, 522b created the child network, the two devices 522a and 522b communicate with each other via a child wireless links 590. Also, Fig. 6C in view of cell 505a, when master terminal 510a detects that receiving signal strength from isolated terminal 522a below threshold, edge terminal 522a becomes master terminal and form a cell 560a which includes the isolated terminal 522b so that both devices 522a and 522b have peer-to-peer connection to communicate with each other and whenever, they have peer-to-peer connection, they must exchange messages with each other. Also, Choi, Col 5, lines 9-31, teaches the AP 14 updates the table to reflect the received signal strength level for each active STA then newly allocates time allocation for all STAs. Based on the updated information, the AP 14 can determine which stations are hidden from each other. If the received signal quality degrades below a set limit, a subsequent frame message from the AP 14 to the active STAs is transmitted to designate time allocation for multiple peer-to-peer transmissions. Upon receiving each beacon frame, each active STA processes the beacon signal to determine the time allocation for concurrent transmission. For the

reasons as set forth above, the examiner contends that the rejection to 1,3-20,22-39,41-46 is proper.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DOMINIC E. REGO whose telephone number is (571)272-8132. The examiner can normally be reached on Monday-Friday, 8:30 am-5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duc M. Nguyen can be reached on 571-272-7503. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Dominic E. Rego

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